Operating Instructions
Gebruiksaanwysings

Video Cassette Recorder

NV-SD200BA
NV-SD190BA

VHS PAL

SUPER DRIVE AI
INTELLIGENT CONTROL SYSTEM

Before attempting to connect, operate or adjust this product, please read these instructions completely.

VQT6280

Dear Customer

May we take this opportunity to thank you for purchasing this Panasonic Video Cassette Recorder.

We would particularly advise that you carefully study the Operating Instructions before attempting to operate the unit and that you note the listed precautions.

IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

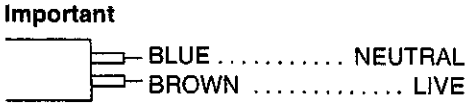
WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

FOR YOUR SAFETY

- **DO NOT REMOVE OUTER COVER.**
  To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
- **AC MAINS LEAD CONNECTION**
  The wires in the mains lead of this apparatus are coloured in accordance with the following code.

Important



Mains Lead

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug proceed as follows: The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.

HQ (High Quality) Picture System

Video recorders carrying the HQ symbol mark feature the new VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

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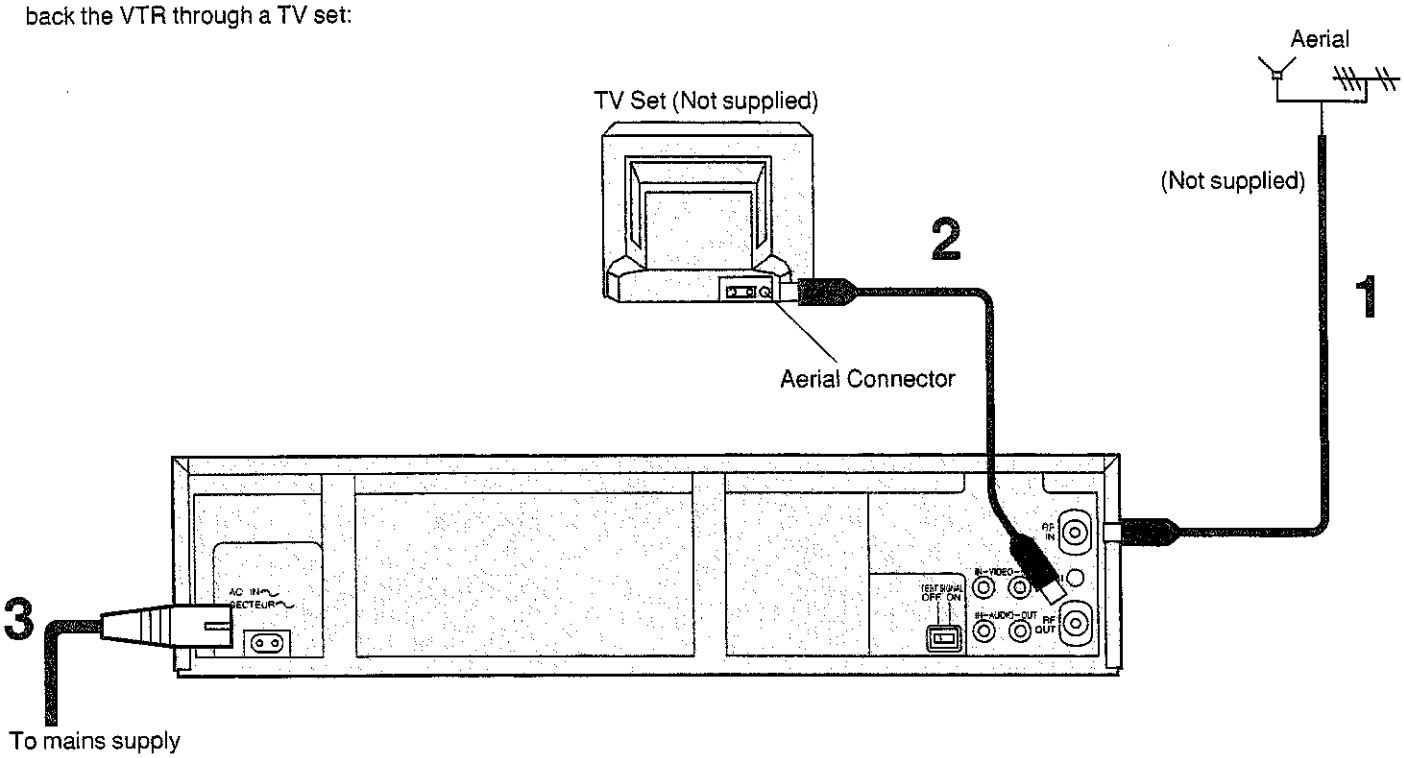
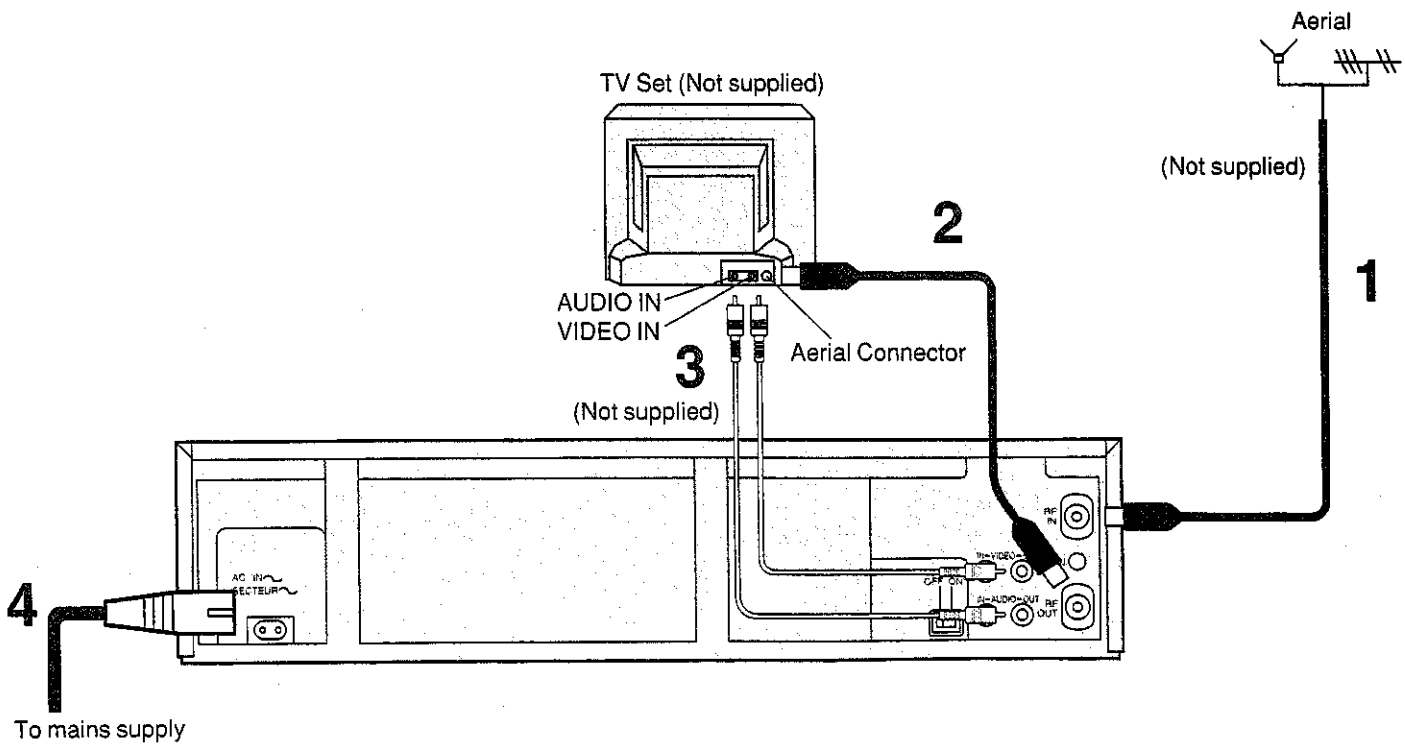
This tells you how to connect the VTR to an aerial, TV, etc.

Basic Connections

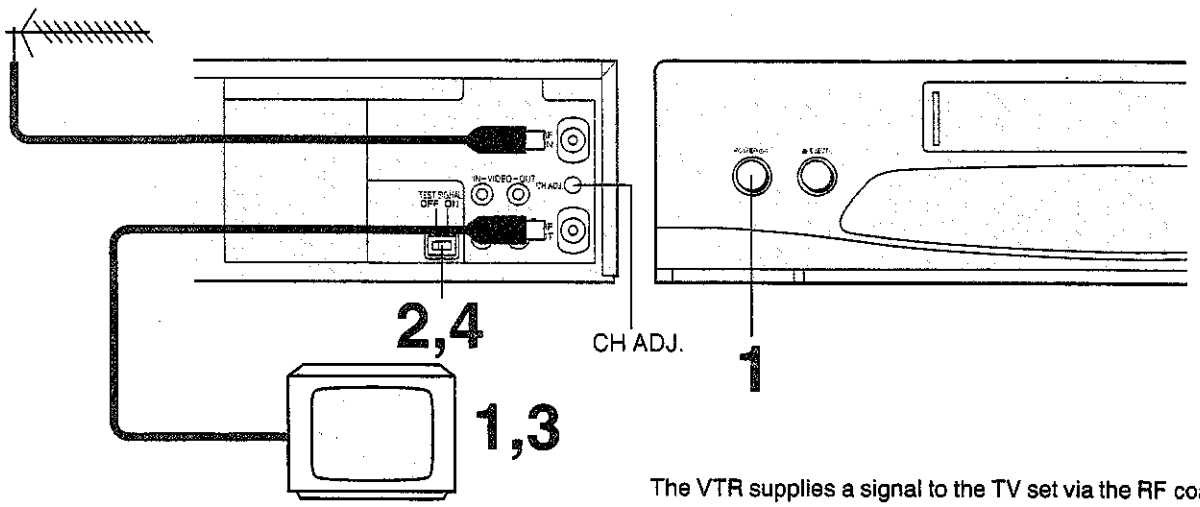
The following connections are required to record and play back the VTR through a TV set:



Connection to a TV Set with the Audio/Video Input Sockets



Tuning the TV to your VTR



The VTR supplies a signal to the TV set via the RF coaxial cable on channel 38.

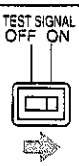
It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the video and audio input sockets then you do not need to follow the procedure mentioned below.

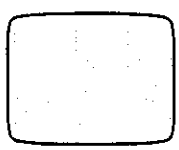
Operations

1

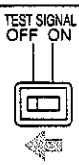
Turn on the TV and VTR.

2 

To generate a test pattern, set **TEST SIGNAL** to ON.

3 

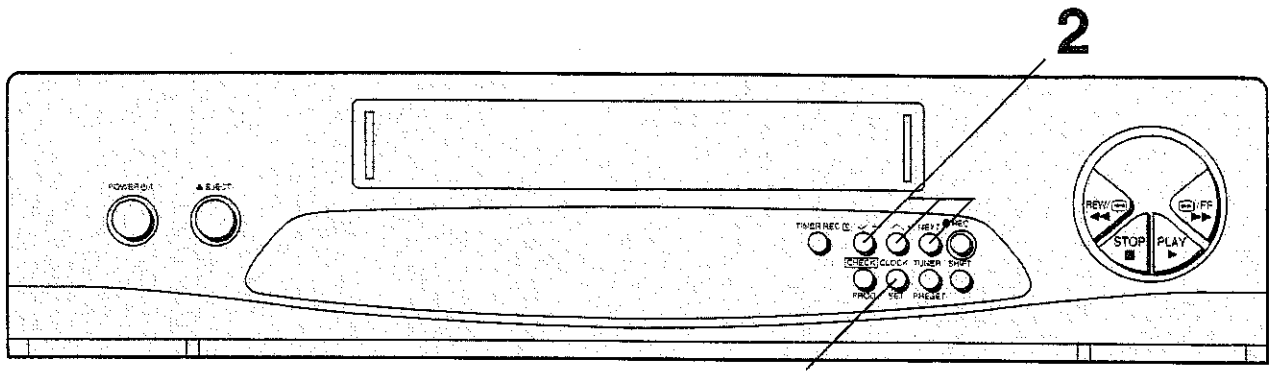
Set the TV to an unused position which you wish to use for your video playback.

4 

Set **TEST SIGNAL** to OFF.

Note:
The test signal is transmitted on video channel 38.
If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (30–40) by using the **CH ADJ.** screw which is located on the rear of the VTR.
Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item **2** to **4** above.

Setting the Clock of the VTR

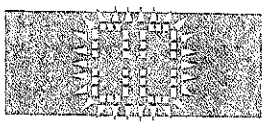
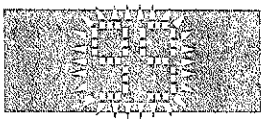
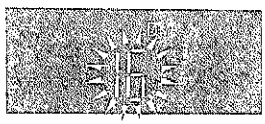
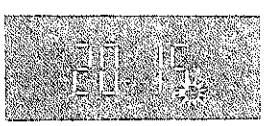


The built-in clock is used to activate the timer for automatic recording and must be set to the correct time.
The built-in digital clock employs the 24-hour system.

Preparation

Turn on the VTR.

For Example:
Date; 16th, October, 1999
Time; 20:15

Operations	Display Symbols	
1 CLOCK SET		Keep **CLOCK SET** pressed for more than 2 seconds.
2 Set each item by pressing + or – and **NEXT**.		
– +		Set **Year** "99".
		Set **Month** "10".
		Set **Date** "16".
		Set **Hour** "20".
NEXT		Set **Minute** "15". ●There is no need to press **NEXT**.
3 CLOCK SET		Press **CLOCK SET**. ●The clock will start.

Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

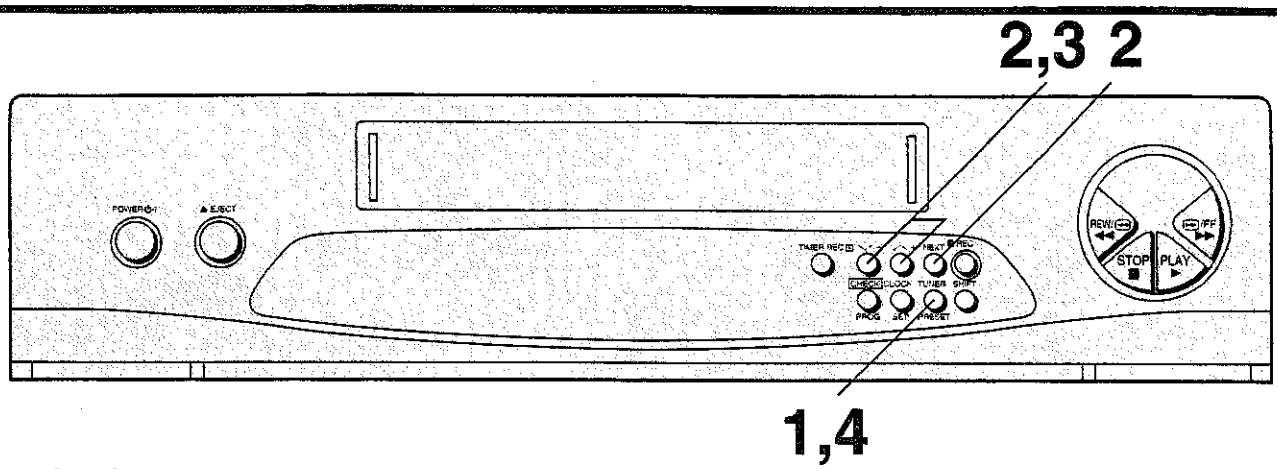
For example:
Resetting the clock to 12:00.00

1 Keep **CLOCK SET** pressed at any time between 11:58.00 and 12:01.59 for more than 2 seconds.

2 Press **CLOCK SET** again as soon as you hear the 12:00.00 time signal.

ENGLISH

Storing TV Broadcasts into your VTR

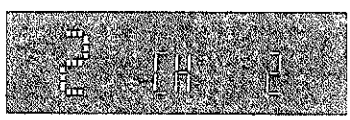
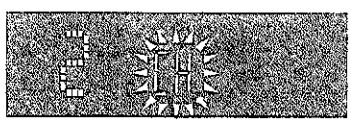


Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 42 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except AV.

Operations	Display Symbols	
1 TUNER PRESET		Keep **TUNER PRESET** pressed for more than 2 seconds.
2 − + ⇨ NEXT		Select the programme position, then press **NEXT**.
3 − +		Search for the required TV station.
4 TUNER PRESET		Press **TUNER PRESET** twice.

Fine Tuning Procedure

1 Keep **TUNER PRESET** pressed for more than 2 seconds, and then press again.

2 Press **NEXT**.

3 Press + or − to obtain the best tuning condition.
- "A" Indicator disappears.
- To return the tuning to its former state, press **SHIFT**.

4 Press **TUNER PRESET**.

Blanking of Unoccupied Programme Positions

1 Keep **TUNER PRESET** pressed for more than 2 seconds.

2 Select a programme position which you do not want to tune to a TV station, by using + or −.

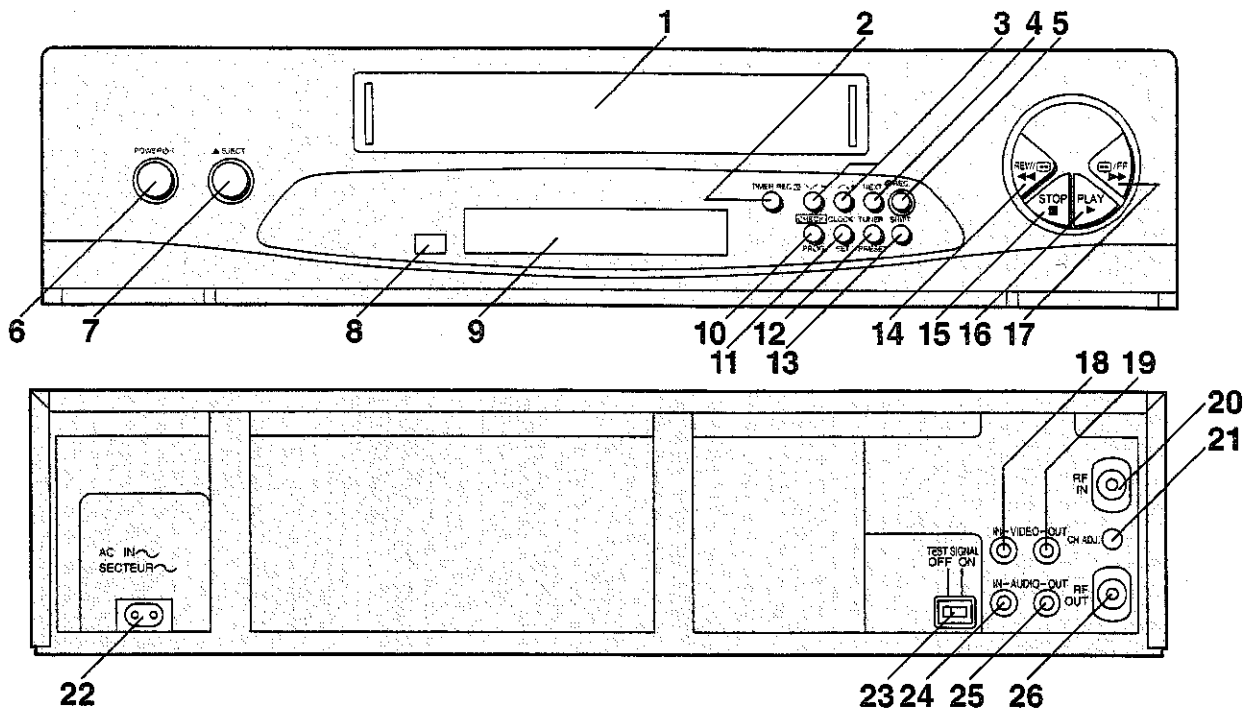
3 Press **SHIFT**. ("− −" is displayed.)
- Repeat steps **2** and **3** for other unoccupied programme positions to skip during the selection of the programme positions.
- To cancel the blanking of a programme position, select that programme position on the VTR and then press **SHIFT**.

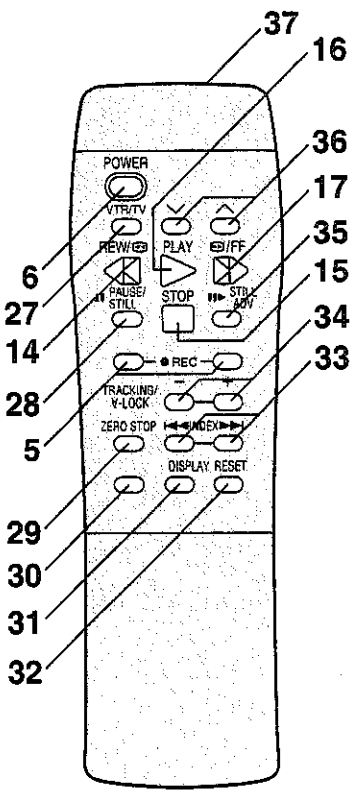
4 Press **TUNER PRESET** twice.

Channel Plan

VHF	UHF
4–13	21–68

Controls and Connection Sockets





1 Cassette Compartment
Insert a video cassette here.

2 TIMER REC
To turn the timer recording function on and off.
⏲ is lit or not lit.
Once activating timer recording normal operation is not possible, unless this button is set to off.

3 ∨ ∧/− +
To select the required programme position (TV station).
To set the clock and timer recording.

4 NEXT
To proceed to the next item during setting procedures.

5 REC
To start a recording.

6 POWER ⏻/I
To switch the VTR from on to standby mode or vice versa. In standby mode, the VTR is still connected to the mains.

7 EJECT
To eject a video cassette.

8 Infra-red Remote Control Receiver Window

9 Display

10 CHECK/PROG
To select a timer programme number.
"P1, P2, P3 ... or P8" is lit.
To display details of preset timer recording in the timer standby mode.

11 CLOCK SET
To set the time.

12 TUNER PRESET
To initiate TV station settings for the tuner.

13 SHIFT
To blank unoccupied programme positions.

14 REW (REWIND)

In the stop mode:	To rewind the tape.
In the playback mode:	To search backward.
In the rewind mode:	To obtain high speed picture.

"◁◁" is lit.

15 STOP
To stop any playback or recording.

16 PLAY
To start playback. "▷" is lit.

17 FF (FAST FORWARD)

In the stop mode:	To fast forward the tape.
In the playback mode:	To search forward.
In the fast forward mode:	To obtain high speed picture.

"▷▷" is lit.

18 VIDEO IN
To connect a video cable to a movie camera or another video recorder.

19 VIDEO OUT
To connect a video cable to a TV or another video recorder.

20 RF IN
To connect to the external aerial.

21 CH ADJ.
To adjust the RF transmitting channel 30–40.

22 AC IN~
To connect to the mains power supply.

23 TEST SIGNAL
The test signal is transmitted on channel 38.

24 AUDIO IN
To connect an audio cable to a movie camera or another video recorder.

25 AUDIO OUT
To connect an audio cable to a TV or another video recorder.

26 RF OUT
To connect to the aerial terminal on a TV set.

27 VTR/TV
No function.

28 PAUSE/STILL
During playback: Still picture.
During recording: To interrupt recording.

29 ZERO STOP
For the zero stop function.

30 No function.

31 DISPLAY
To change the indication on the VTR Display.

Clock↔Counter

32 RESET
To reset the tape counter (elapsed time) to "0:00.00".
- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

33 INDEX
For the index search function.

34 TRACKING/V-LOCK
For manual tracking adjustment
The + and – buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For still advance tracking adjustment
When noise bars appear during Still or Still advance switch over to still advance and adjust with the + or – button to reduce the noise bars.

For vertical locking adjustment
Use the + and – buttons to minimize any vertical jitter during still-picture playback.

35 STILL ADV
To advance a still picture during still playback.

36 Programme Position Selector Buttons
To select the programme positions.

37 Infra-red Transmitter

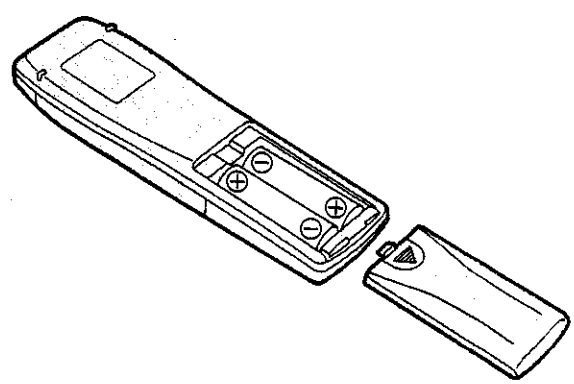
Power source for the remote controller

The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

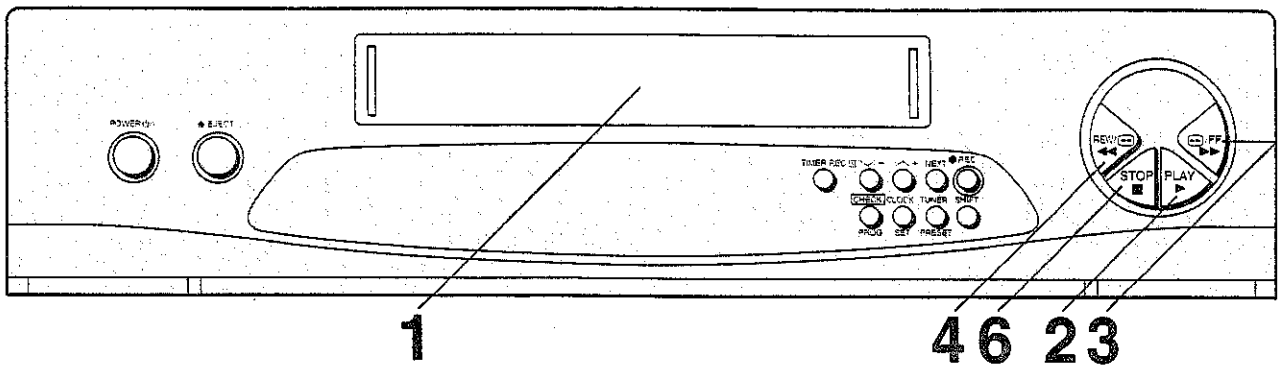
Precautions for battery replacement

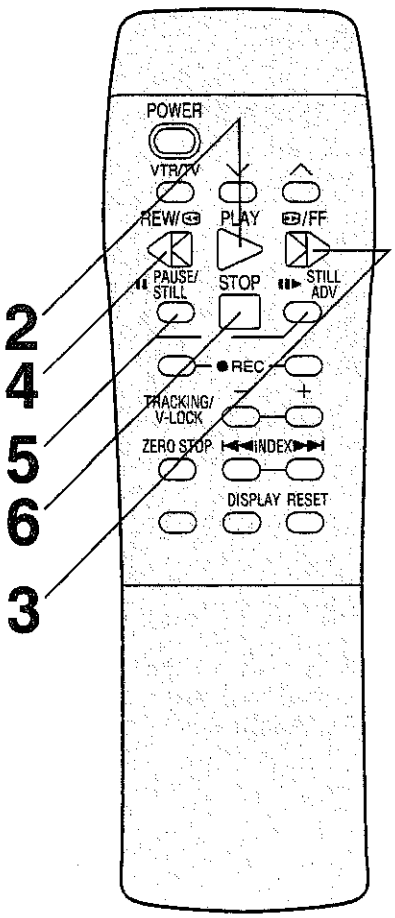
- Load the new batteries with their polarity (⊕ and ⊖) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

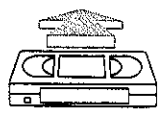
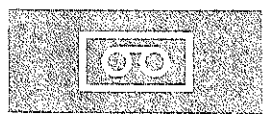
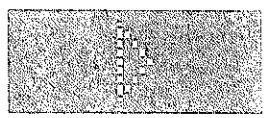
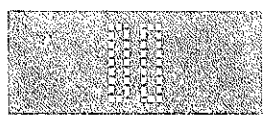
Loading the batteries



Playback



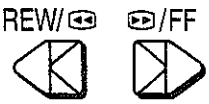


Operations	Display Symbols	
1 		Insert a recorded cassette tape.
2 PLAY		Start viewing the picture.
3 /FF		Search forward by tapping **FF**. ●To change back to normal playback, press **PLAY**.
4 REW/		Search backward by tapping **REW**. ●To change back to normal playback, press **PLAY**.
5 PAUSE/ STILL STILL ADV		View a still picture. ●To advance the still picture, press **STILL ADV**. ●To continue the normal playback, press **PLAY**.
6 STOP		Stop viewing the picture.

Other Playback Functions

To obtain high speed picture during fast forward or rewind

Keep **FF** pressed during fast forward.
Keep **REW** pressed during rewind.



Note:
Cue or review playback will be automatically released after 10 minutes, and still playback after 5 minutes.

To return to a specified scene

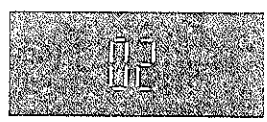
1 Press **RESET** to set the counter to 0:00.00.

2 After playback, press **ZERO STOP** in the stop mode.

- The tape will be rewound or fast forwarded to 0:00.00.

To find the beginning of each recording

For example:
Searching for the 2nd recorded segment in the forward direction.
Press **INDEX** ▶▶I twice.

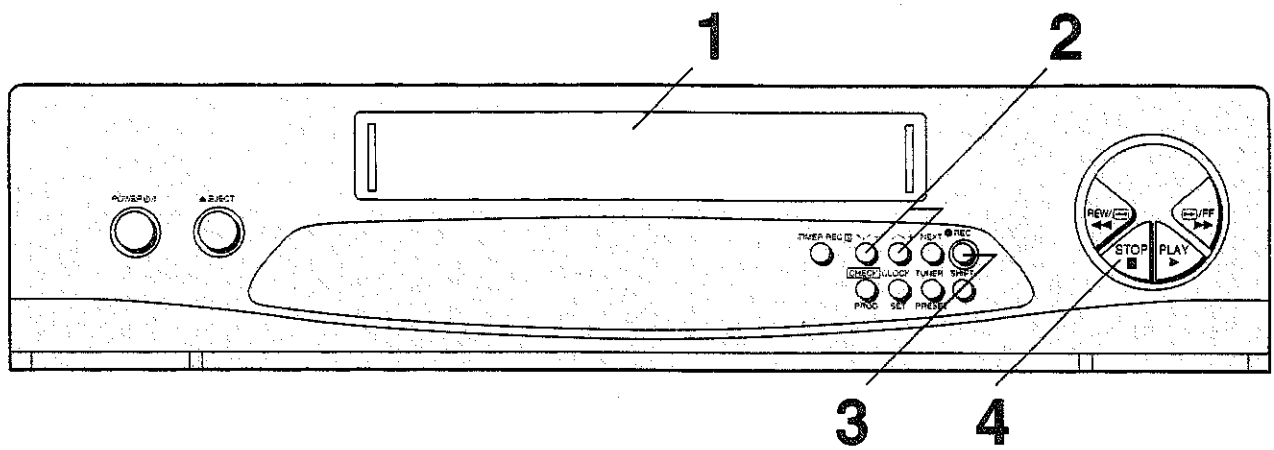


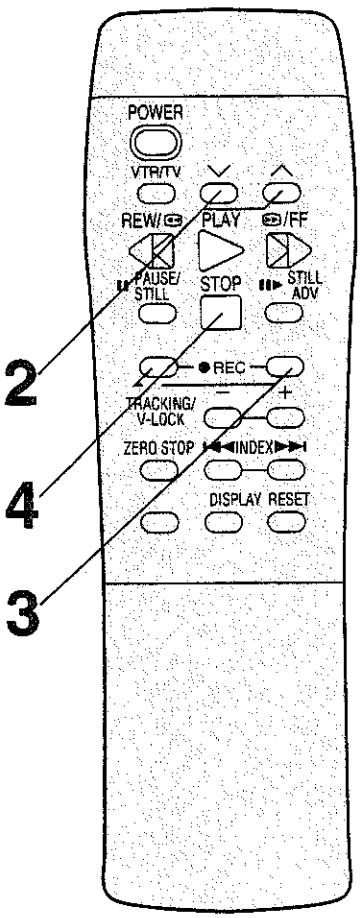
- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX** I◀◀.
- Up to 20 programmes can be searched for in both directions.

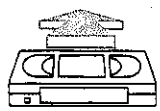
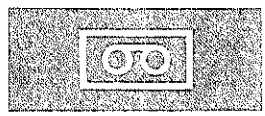
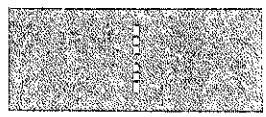
Recording Index Signals
Index signals are recorded in following cases.
- When a recording is started by pressing **REC**.
- When **REC** is pressed during recording.
- When timer recording is activated.

Note:
The INDEX search function can only work correctly, if the index signals are spaced at least 3 minutes.

On-the-spot Recording

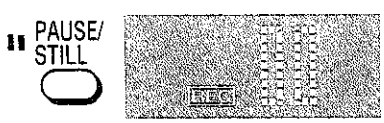




Operations	Display Symbols	
1 		Insert a cassette tape. ●If it has already been inserted, press **POWER** to turn the VTR on.
2		Select TV station.
3 REC		Start recording.
4 STOP		Stop recording.

To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.



To record one TV programme while viewing another programme

1 Refer to the on-the-spot recording operations steps 1 to 3.

2 Select the TV programme on your TV set you wish to view at the present time.

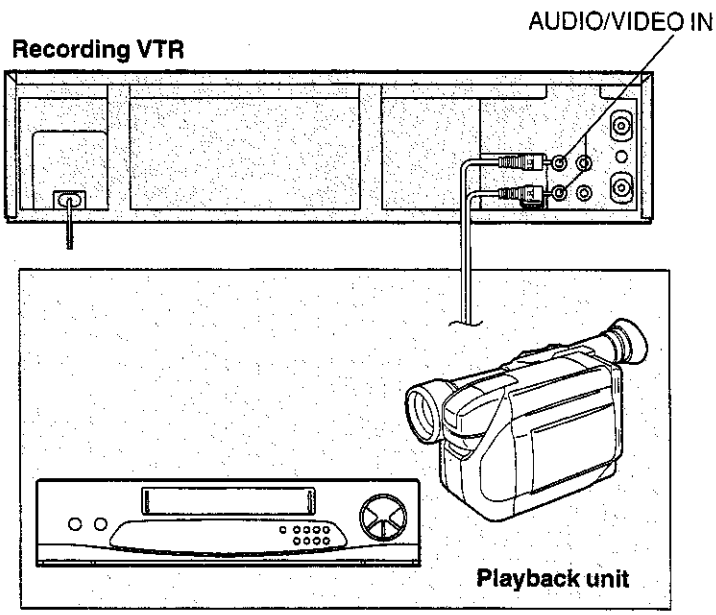
Notes:

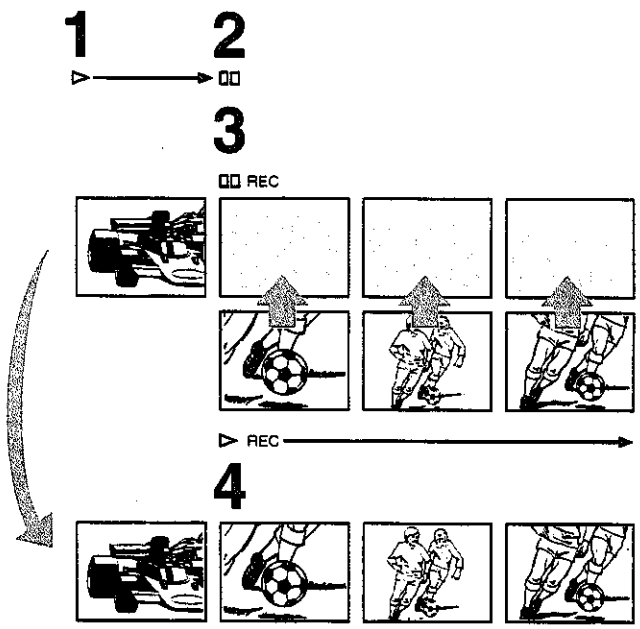
- When a video cassette with a broken off tab is inserted, the "⊙⊙" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes.

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

This enables you to record a new segment immediately after a previously recorded segment.





Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing ∨∧ to set AV.

Operations

1 Search for the end of the previous recording.

PLAY

2 Press **PAUSE/STILL** at the end point.

PAUSE/ STILL

3 Set for the new recording by pressing **REC**.

REC

4 Start the new recording by pressing **PAUSE/STILL** again.

PAUSE/ STILL

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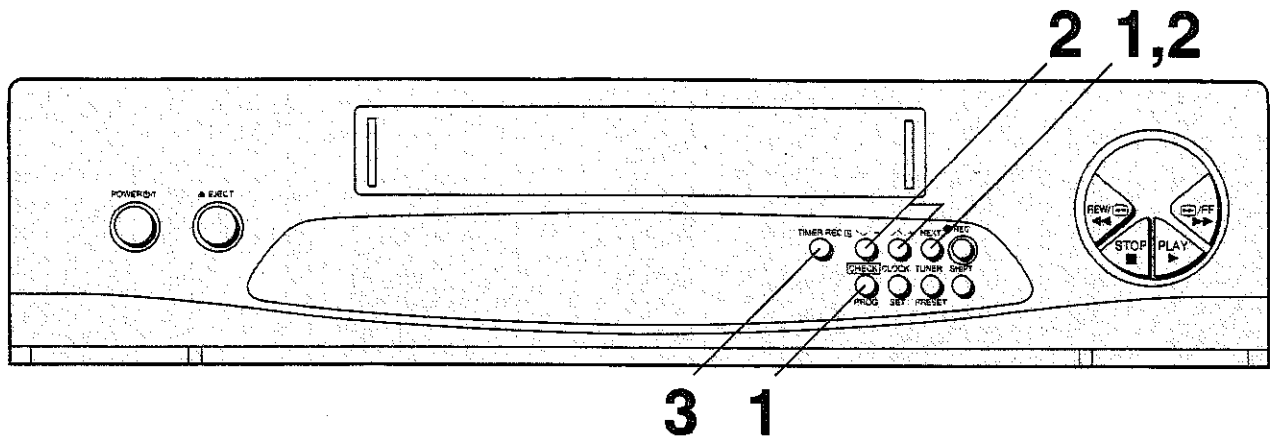
Timer Recording



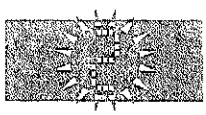
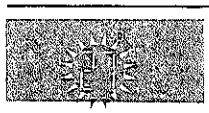
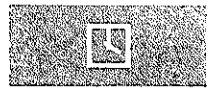
Up to 8 programmes can be recorded up to one month in advance by setting the timer.

Preparation

Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer Programme number;	1
Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30
(present date; 16th October)	

Operations	Display Symbols	
1 CHECK → NEXT; PROG		Select **Timer Programme number** "1", and then press **NEXT**. **P1** --------: When nothing is programmed
2 Set each item by pressing + or − and **NEXT**.		
− +		Set **Programme position** (channel) "2".
		Set **Date** "27".
↓		Set **Starting time** (hour) "20".
		Set **Starting time** (minute) "02".
NEXT		Set **Ending time** (hour) "21".
		Set **Ending time** (minute) "30". ●There is no need to press **NEXT**.
3 TIMER REC		To activate timer recording, press **TIMER REC**.

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, select the AV indicator for the programme position.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme in the timer standby mode

Select the timer programme number to be checked by pressing **CHECK/PROG**.

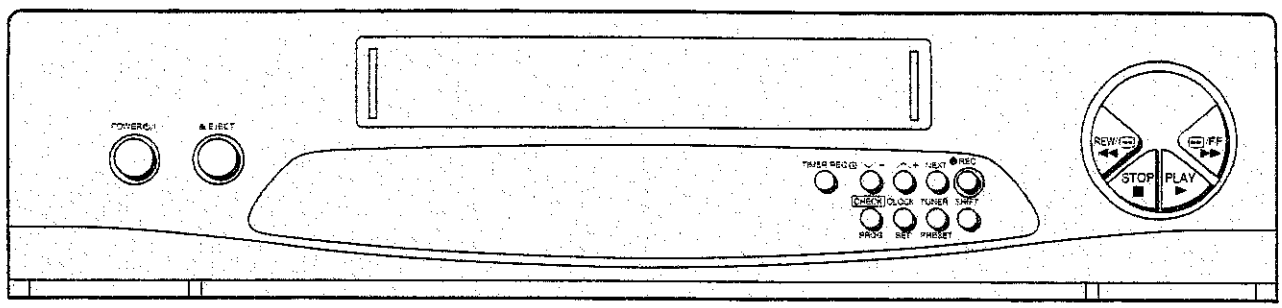
Cancelling a Timer Programme

1 Release from the standby mode by pressing **TIMER REC**.

2 Select the timer programme number to be canceled by pressing **CHECK/PROG**.

3 Press + and − simultaneously for more than 3 seconds.

Other Functions



Other Automatic Function

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Before Requesting Service

Before requesting service, check the following points once again.

VTR will not operate correctly			
SYMPTOM	**CAUSE**	**REMEDY**	**CHECKED**
VTR display is not illuminated.	Mains lead is not connected.	Reconnect mains lead to VTR.	
VTR display is illuminated but VTR will not operate.	VTR is in timer mode.	Press **TIMER REC** to operate VTR manually.	
	Safety devices are operating.	Disconnect mains lead and wait for 1 minute. Reconnect mains supply and check functions.	
	Condensation may have formed.	Do not operate VTR for 1 hour.	

Playback will not operate correctly			
SYMPTOM	**CAUSE**	**REMEDY**	**CHECKED**
Picture noisy or not in colour. Horizontal bars or lines run down the screen.	Tracking is not correct.	Adjust the tracking. See page 9.	
	TV set is not tuned to VTR.	Operate test switch on VTR and check TV tuning. See page 4.	
	Video heads are clogged or worn.	Consult your dealer for further advice.	

Recording will not operate correctly			
SYMPTOM	**CAUSE**	**REMEDY**	**CHECKED**
"⊙⊙" indication flashes whenever recording is attempted.	Erasure prevention tab on cassette is broken off.	Use tape with intact erasure prevention tab, or cover tab hole with adhesive tape, if original recording is no longer required.	
Picture is recorded with noise or blank screen.	Aerial or aerial lead is defective.	Check aerial connection to VTR. See page 3. Check your normal TV picture. If there is no picture, check your aerial.	
	VTR is not correctly tuned.	Re-tune VTR. See page 6.	
Timer recording cannot be performed.	Clock or calendar is incorrectly set.	Check clock and calendar. Set to present time. (Note this is a 24 hour clock.) See page 5.	
	Recording start or end time settings are incorrect.	Set recording start and end time correctly.	
	VTR is not set for timer recording.	Press **TIMER REC** after programming for timer recording.	
AV external recordings cannot be made.	AV is not selected.	Select AV by pressing ∨ ∧.	
	External AV connections are incorrect.	Check that connections for external video and audio source are correct. See page 13.	

Remote controller will not work correctly			
SYMPTOM	**CAUSE**	**REMEDY**	**CHECKED**
Remote controller does not operate correctly.	Remote controller transmitter beam is not reaching VTR.	Ensure that remote controller is being pointed at VTR and that transmitter beam is not obstructed.	
	Distance is too far.	Use remote controller within 7 m of VTR. If this range is not possible, replace batteries.	
	Batteries are exhausted.	Replace batteries. Note precautions for replacement on page 9.	
	Batteries are incorrectly fitted with (+/−) reversed.	Fit batteries correctly as shown on page 9.	

Precautions

Please read these cautions before you operate this VTR.

Avoid Sudden Changes in Temperature

If the VTR is suddenly moved from a cold place to a warm place, condensation may form on the tape and inside the VTR.

Humidity and Dust

Avoid places where there is high humidity or much dust, which may cause damage to internal parts.

Do Not Obstruct the Ventilation Holes

The ventilation holes prevent abnormal increase in temperature. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

Keep away from High Temperature

Keep the VTR away from extreme direct heat such as direct sunlight, heating radiators, or closed automobiles.

Keep Magnets away

Never bring a magnet or magnetized object near the VTR because it will adversely affect the performance of the VTR.

No Fingers or Other Objects Inside

Touching internal parts of this VTR is dangerous, and may cause serious damage to the VTR. Do not attempt to disassemble the VTR. There are no user serviceable parts inside.

Keep Water away

Keep the VTR away from flower vases, tubs, sinks, etc.
CAUTION: If liquids are spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, consult qualified service personnel.

Lightning

To avoid damage by lightning, disconnect the aerial plug from the VTR.

Cleaning the VTR

Wipe the VTR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. And do not use compressed air to remove dust.

Stacking

Place the VTR in a horizontal position, and do not place anything heavy on it.

Video Head Clogging

The video heads place picture signals on the tape during recording and read picture signals from the tape during playback and they are, therefore, of critical importance for the picture quality. If the VTR is used over extremely long periods of time, these heads may still become dirty and clogged. In such a case, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, during the playback of a tape, the sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such a symptom case occurs have the recorder checked by qualified service personnel.

If Dew Condensation Forms in the VTR

Condensation may form in the VTR if:

- The VTR is in a room when the heater has just been turned on.
- The VTR is in a room with steam or high humidity.
- The VTR is brought from cold surroundings into a well-heated room.
- The VTR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.

Note:
This model does not incorporate a dew sensor.
Do not operate the VTR for at least 1 hour if any of the above conditions occur.

ENGLISH

Specifications

NV-SD200BA
NV-SD190BA

Power Source:	220–240 V AC 50–60 Hz		
Power Consumption:	Approx. 19 watts		
Video Recording System:	2 rotary heads, helical scanning system		
Video Heads:	2 heads		
Tape Speed:	23.39 mm/sec.		
Tape Format:	VHS tape		
Record/Playback Time:	240 min. with NV-E240		
VIDEO			
Television System:	CCIR; 625 lines, 50 fields, PAL colour signal		
Modulation System:	Luminance; FM azimuth recording		
	Colour signal; converted subcarrier phase shift recording		
Input Level:	VIDEO IN (PHONO);	1.0 Vp-p,	75 ohm, terminated
Output Level:	VIDEO OUT (PHONO);	1.0 Vp-p,	75 ohm, terminated
	RF Modulated;	UHF channel 38 (30–40),	75 ohm
AUDIO			
Input Level:	AUDIO IN (PHONO);	more than −10 dBV,	more than 50 kohm
Output Level:	AUDIO OUT (PHONO);	−6 dBV,	less than 1 kohm
Audio Track:	1 track (Normal-mono only)		
Video Horizontal Resolution:	Colour; more than 240 lines		
Signal-to-Noise Ratio:	Video; more than 43 dB		
	Audio; more than 43 dB		
Audio Frequency Response:	80 Hz–10 kHz		
Operating Temperature:	5°C–40°C		
Operating Humidity:	35%–80%		
Weight:	4.2 kg		
Dimensions:	430 (W)×99.9 (H)×295 (D) mm		
Standard Accessories:	1 pc. RF Coaxial Cable		
	1 pc. Remote Controller		
	2 pcs. "R6" size batteries		
	1 pc. AC Mains Lead		

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.